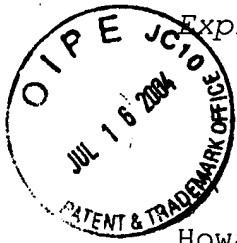


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Express Mail Label No.:  
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Docket No.: 2585-001

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Howard PFEFFER et al.

Appln. No.: **09/533,463**

Filed: March 23, 2000

Group Art Unit: 2154

Conf. No.: 9924

Examiner: V. Vu

Title: Reduction of Network  
Server Loading

**TRANSMITTAL LETTER**

M/S Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed please find the following:

1. Brief on Appeal (one original and two copies); and
2. Check for fee of \$165.00 (appeal brief fee).

The Director of the U.S. Patent & Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to Deposit Account No. 18-1579. A duplicate copy of this transmittal letter is enclosed.

Respectfully submitted,  
ROBERTS ABOKHAIR & MARDULA, LLC

Kevin L. PONTIUS  
Reg. No. 37512  
505-922-1400

Date: July 16, 2004

RA&M Ref.: 2585-011



Docket No.: 2585-001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Howard PFEFFER et al.

Appln. No.: 09/533,463

Filed: March 23, 2000

Group Art Unit: 2154

Conf. No.: 9924

Examiner: V. Vu

Title: Reduction of Network  
Server Loading

**APPELLANT'S BRIEF ON APPEAL  
UNDER 37 C.F.R. § 1.192**

M/S Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the provisions of 37 C.F.R. § 1.192,  
Appellant submits the following:

**I. REAL PARTY IN INTEREST**

Based on information supplied by Appellant, and to the best of Appellant's legal representatives' knowledge, the real party in interest is the assignee, Service Co., which is a wholly owned subsidiary of Time Warner Cable.

**II. RELATED APPEALS AND INTERFERENCES**

An appeal has also been noticed and briefed in related application no. 09/548,308, which is commonly assigned with the present application.

Date: July 16, 2004

RA&M Ref.: 2585-011

**APPELLANT'S BRIEF ON APPEAL**  
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Appellant, as well as Appellant's assigns and legal representatives are unaware of any other appeals or interferences which will be directly affected by, or which will directly affect, or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 1-31 are currently pending. Claims 6 and 17 have been allowed. Claims 9-11, 20-27, and 29-31 have been withdrawn from consideration as pertaining to a non-elected invention. Claims 1-5, 7, 8, 12-16, 18, 19, and 28 are appealed. Claims 1-5, 7, 8, 12-16, 18, 19, and 28, as finally rejected, are set forth in the attached Appendix along with the allowed and withdrawn claims.

**IV. STATUS OF AMENDMENTS**

No amendment has been filed subsequent to the final rejection.

**V. SUMMARY OF THE INVENTION**

Appellants' invention, as disclosed and recited in the elected claims, has three aspects: a method, an apparatus, and a network. The method aspect of the invention is recited in finally rejected claims 1-5, 7, and 8. The apparatus aspect of the invention is recited in finally rejected claims 12-16, 18,

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19. The network aspect of the invention is recited in finally rejected claim 28.

Appellant's invention is generally directed to the idea of making a network operate more efficiently by moderating the tendency of users' email clients from spewing a steady stream of mail requests out across the network to query the users' respective mail servers whether any mail has arrived since the last check. Mail requests are small packets; they do not take up much bandwidth individually. However, when hundreds of thousands of users use a network at once and their email clients each send out rapid fire mail requests (e.g., once per second), the aggregate affect creates an unnecessary undertow that slightly reduces the capacity of the network. The amount of capacity lost is not large, but gone is gone. And, for no good reason, because no user really needs to check for email messages every second they are sitting at their computer.

The present invention (as a method, as an apparatus, and as a network) moderates the impact on network operations that would occur from unchecked mail requests. A proxy server (so called because it acts as a proxy for a user's true mail server) intercepts the mail requests and lets only a portion of them through to proceed across the network to the mail server they are intended to find.

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The method aspect of the invention is claimed from the point of view of a proxy server and has two steps. See claim 1. One step is to permit a mail request for a mail client to pass through the proxy server to the mail server. See specification at page 20, lines 6-8. The other step is to attenuate subsequent mail requests for the mail client at the proxy server until a predetermined condition has been satisfied. See specification at page 20, lines 4-6.

Dependent claims 2-5 and 8 recite narrower limitations concerning the condition upon which attenuation is discontinued. See specification at page 7, lines 1-4 and 15-22. Dependent claim 7 recites a narrower limitation concerning what "attenuation" includes. See specification at page 6, lines 8-16.

The apparatus aspect of the invention is claimed as a proxy server (refer to block 50 in Fig. 1) that has a processor and a memory and which implements execution of a method having two steps. See claim 12. These steps are the same as claimed in independent method claim 1.

The network aspect of the invention is claimed as the combination of at least one mail server (refer to block 30 in Fig. 1) and a plurality of proxy servers (refer to block 50 in Fig. 1). See claim 28. Each of the proxy servers is defined

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commensurate with the proxy server defined in independent claim 12.

**VI. ISSUE**

The sole issue on appeal is this:

Are claims 1-5, 7, 8, 12-16, 18, 19, and 28 obvious, within the meaning of 35 U.S.C. § 103, over Dutta (US 6546423) in view of McDaniel (US 6510214)?

**VII. GROUPING OF CLAIMS**

The appealed claims stand or fall according to the following groupings:

Group 1 → Claims 1, 7, 8, 12, 18, 19, and 28

Group 2 → Claims 2, 3, 13, and 14

Group 3 → Claims 4, 5, 15, and 16

**VIII. ARGUMENTS**

**A. Patentability of Claims 1-5, 7, 8, 12-16, 18, 19, and 28**

**A.1. The Motivation Identified Is Off Point**

The Examiner identifies that the motivation for modification of the prior art is that "it would have protected the application servers against the overload conditions." See Paper No. 4 at page 3, lines 19, 20. However, this motivation has little (if anything) to do with the claimed invention. The claimed invention aspires to handling of mail requests for electronic

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mail at a mail server. See claim 1 at the last three lines; claim 12 at the last three lines; claim 28 at the last three lines. Such mail requests are small packets and are not a threat to hog so much bandwidth that they would overload a server. Thus, the threat of overload would not have been a motivation to attenuate them.

The overload problems that are identified in the prior art are a concern in the context of those disclosures that are directed to routing of data payloads and telecommunication circuits that carry substantial payloads that carry a real threat of overwhelming a server if not managed carefully. Of course, those concerns are real in that context. But that is not the context of the present invention, which is directed to handling of mail requests.

Since the identified motivation to modify the prior art is not relevant to the claimed invention, Appellant respectfully submits that the Dutta and McDaniel references are not sufficient evidence to render obvious this invention that Appellant claims.

**A.2. The Modification Urged Is Not Supported By Evidence**

The Examiner contends that it would have been obvious "to apply Dutta's invention to any type of application servers including email servers." See Paper No. 4 at page 3, lines 22,

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23. Besides not identifying a motivation for why it would have been obvious to apply Dutta's teachings globally to any type of application servers, Appellant notes that there is no evidence identified in the record that supports this stated legal conclusion.

A *prima facie* case of obviousness requires that there be some teaching, suggestion, or motivation to combine or modify the teachings of the prior art, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992); *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); *In re Linter*, 458 F.2d 1013, 173 U.S.P.Q. 560 (C.C.P.A. 1972). In an obviousness determination, the factual question of motivation to combine prior art is material to patentability, and cannot be resolved on subjective belief and unknown authority. *In re Lee*, 1277 F.3d 1338, 1345, 61 U.S.P.Q.2d 1430, 1433-1434 (Fed. Cir. 2002). An Examiner can satisfy the burden of showing obviousness of the combination only by showing some objective teaching in the prior art. *Id.* at 1344, 61 U.S.P.Q.2d at 1433-1434 ("The factual inquiry whether to combine references must be thorough and



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searching. It must be based on objective evidence of record.").

Thus, since there is no evidence to support the Examiner's contention, Appellant respectfully submits that a *prima facie* case of obviousness has not been established with respect to claims 1-5, 7, 8, 12-16, 18, 19, and 28.

**A.3. Both References Are Non-Analogous Art**

A reference is directed to non-analogous art when it is drawn from a diverse field of endeavor from the claimed invention and it does not solve the same problem as that faced by the inventor of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 1446, 24 U.S.P.Q.2d 1443, 1445, (Fed. Cir. 1992); *In Re Clay*, 966 F.2d 656, 659, 23 U.S.P.Q.2d 1058, 1061 (Fed. Cir. 1992); *In Re Deminski*, 796 F.2d 436, 230 U.S.P.Q. 313 (Fed. Cir. 1986); *In Re Wood*, 599 F.2d 1032, 1036, 202 U.S.P.Q. 171, 174 (C.C.P.A. 1979).

The Dutta reference is drawn from a diverse field of endeavor because it manages routing of data sessions, not email.

The Dutta reference solves the problem of how to rebalanced bandwidth load caused by a network session. This is quite different from the problem Appellant sought to solve, which was how to improve network efficiency by reducing the number of needless email requests flowing across the network to a remote

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mail server. Thus, Appellant respectfully submits that Dutta is non-analogous prior art.

The McDaniel reference is drawn from a diverse field of endeavor because it manages routing and connection of telecommunication circuits, not email. The McDaniel reference solves the problem of how to handle inter-switch signaling in telecommunication overload scenarios. This is quite different from the problem Appellant sought to solve, which was how to improve network efficiency by reducing the number of needless email requests flowing across the network to a remote mail server. Thus, Appellant respectfully submits that McDaniel is non-analogous prior art.

Considering that the Dutta and McDaniel references are non-analogous prior art, Appellant respectfully submits that it is not appropriate to use them as a basis of an obviousness rejection of the claimed invention.

**A.4. Not All Limitations Are Taught By The References**

In order to make out a *prima facie* case of obviousness, the prior art must teach or suggest each and every limitation of the claimed invention, as the invention must be considered as a whole. *In re Hirao*, 535 F.2d 67, 190 U.S.P.Q. 15 (C.C.P.A. 1976).

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Independent method claim 1 recites the limitation:

attenuating subsequent mail requests for the  
mail client at the proxy server until a  
predetermined condition has been satisfied.

See claim 1 at the last three lines. Independent apparatus claim  
12 recites a similar limitation at the last three lines.

Independent network claim 28 recites a similar limitation at the  
last three lines.

When considered together, Dutta and McDaniel do not teach or  
suggest this expressly recited limitation. They do not suggest  
the attenuation of mail requests.

The Examiner concedes that Dutta does not teach this. To  
overcome this shortcoming in the teachings of Dutta, the Examiner  
relies on the teachings of McDaniel concerning discarding of  
requests. The discarding taught by McDaniel does not teach or  
provide a suggestion of the discarding of mail requests.

Accordingly, Appellant respectfully submits that the  
Examiner has not established a *prima facie* case of obviousness  
with respect to claims 1-5, 7, 8, 12-16, 18, 19, and 28.

**B. Further Patentability of Claims 2, 3, 13, and 14**

Concerning dependent claims 2, 3, 13, and 14, the Dutta and  
McDaniel references are not sufficient evidence of obviousness of  
the additional limitation these claims recite.

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In order to make out a *prima facie* case of obviousness, the prior art must teach or suggest each and every limitation of the claimed invention, as the invention must be considered as a whole. *In re Hirao*, 535 F.2d 67, 190 U.S.P.Q. 15 (C.C.P.A. 1976).

Method claim 2 recites the limitation that the "predetermined condition is a predetermined period of time" at line 2. Apparatus claim 13 recites a similar limitation at line 2. The Dutta and McDaniel references do not teach or fairly suggest the explicitly recited limitation that the predetermined condition is a predetermined period of time.

Accordingly, Appellant respectfully submits that the Examiner has further failed to establish a *prima facie* case of obviousness with respect to dependent claims 2, 3, 13, and 14.

**C. Further Patentability of Claims 4, 5, 15, and 16**

Concerning dependent claims 4, 5, 15, and 16, the Dutta and McDaniel references are not sufficient evidence of obviousness of the additional limitation these claims recite.

In order to make out a *prima facie* case of obviousness, the prior art must teach or suggest each and every limitation of the claimed invention, as the invention must be considered as a whole. *In re Hirao*, 535 F.2d 67, 190 U.S.P.Q. 15 (C.C.P.A.

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1976).

Method claim 4 recites the limitation that the

predetermined condition is a combination  
of a predetermined time period and receipt of  
a notification from the mail server that mail  
has been received for the mail client at the  
mail server

at lines 2-4. Apparatus claim 15 recites a similar limitation at  
lines 2-4. The Dutta and McDaniel references do not teach or  
fairly suggest the explicitly recited limitation that the  
predetermined condition is a combination of a predetermined time  
period and receipt of a notification from the mail server that  
mail has been received.

For the above reasons, Appellant respectfully submits that  
the Examiner has further failed to establish a *prima facie* case  
of obviousness with respect to claims 4, 5, 15, and 16.

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**IX. CONCLUSION**

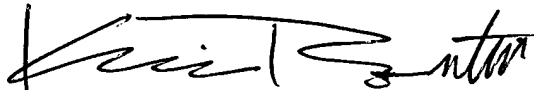
For the above reasons, Appellant respectfully submits that the Examiner has failed to make out a *prima facie* case of obviousness with regard to claims 1-5, 7, 8, 12-16, 18, 19, and 28, and asks that the obviousness rejection be reversed.

The present Brief on Appeal is being filed in triplicate.

Appellant hereby petitions for any extension of time that may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 18-1579.

Respectfully submitted,

ROBERTS ABOKHAIR & MARDULA, LLC



Kevin L. PONTIUS  
Reg. No. 37512  
505-922-1400

Roberts Abokhair & Mardula, LLC  
11800 Sunrise Valley Drive  
Suite 1000  
Reston, VA 20191

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**APPENDIX**

**Pending claims 1-31, including appealed claims 1-5, 7, 8, 12-16, 18, 19, and 28:**

1. *(Original)* A method of moderating traffic load on network servers in a network where electronic mail is retained for retrieval from at least one mail server, the method comprising:

    permitting a mail request for a mail client to pass through a proxy server to the mail server; and

    attenuating subsequent mail requests for the mail client at the proxy server until a predetermined condition has been satisfied.

2. *(Original)* The method of claim 1, wherein the predetermined condition is a predetermined period of time.

3. *(Original)* The method of claim 2, wherein the predetermined period of time is dynamically determined based on the amount of traffic load on the network.

4. *(Original)* The method of claim 1, wherein the predetermined condition is a combination of a predetermined time period and receipt of a notification from the mail server that

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mail has been received for the mail client at the mail server, whichever occurs first.

5. *(Original)* The method of claim 4, wherein the predetermined period of time is dynamically determined based on the amount of traffic load on the network.

6. *(Previously Presented)* A method of moderating traffic load on network servers in a network where electronic mail is retained for retrieval from at least one mail server, the method comprising:

    permitting a mail request for a mail client to pass through a proxy server to the mail server; and

    attenuating subsequent mail requests for the mail client at the proxy server until a predetermined condition has been satisfied, wherein attenuating subsequent mail requests is suspended in the event it is determined that a user is manually initiating rapidly repeated mail requests.

7. *(Original)* The method of claim 1, wherein attenuating includes blocking the subsequent mail requests from transmission across the network to the mail server.

8. *(Original)* The method of claim 1, wherein the predetermined condition is independent of time.



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9. *(Withdrawn)* A method of managing bandwidth usage in a network where electronic mail is retained for retrieval from at least one mail server, the method comprising:

selecting a time when network bandwidth load is low; and  
pushing unretrieved mail messages to a proxy server at the selected time, wherein the pushed mail messages are cached at the proxy server.

10. *(Withdrawn)* The method of managing bandwidth usage of claim 9, wherein selecting a time is based on when bandwidth load at a predetermined point in the network falls below a predetermined threshold.

11. *(Withdrawn)* The method of managing bandwidth usage of claim 9, wherein selecting a time is based on a predetermined time of day.

12. *(Original)* A proxy server for use in a network where electronic mail is retained for retrieval from at least one mail server, the proxy server comprising:

a processor, and  
a memory including software instructions adapted to enable the proxy server to perform the steps of:

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permitting a mail request for a mail client to pass through the proxy server to the mail server; and attenuating subsequent mail requests for the mail client at the proxy server until a predetermined condition has been satisfied.

13. *(Original)* The proxy server of claim 12, wherein the predetermined condition is a predetermined period of time.

14. *(Original)* The proxy server of claim 13, wherein the predetermined period of time is dynamically determined based on the amount of traffic load on the network.

15. *(Original)* The proxy server of claim 12, wherein the predetermined condition is a combination of a predetermined time period and receipt of a notification from the mail server that mail has been received for the mail client at the mail server, whichever occurs first.

16. *(Original)* The proxy server of claim 15, wherein the predetermined period of time is dynamically determined based on the amount of traffic load on the network.

17. *(Previously Presented)* A proxy server for use in a network where electronic mail is retained for retrieval from at

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least one mail server, the proxy server comprising:

a processor, and

a memory including software instructions adapted to enable the proxy server to perform the steps of:

permitting a mail request for a mail client to pass

through the proxy server to the mail server; and

attenuating subsequent mail requests for the mail client

at the proxy server until a predetermined condition

has been satisfied, wherein attenuating subsequent

mail requests is suspended in the event it is

determined that a user is manually initiating rapidly repeated mail requests.

18. *(Original)* The proxy server of claim 12, wherein attenuating includes blocking the subsequent mail requests from transmission across the network to the mail server.

19. *(Original)* The proxy server of claim 12, wherein the predetermined condition is independent of time.

20. *(Withdrawn)* A mail server for use in a network where electronic mail is retained for retrieval from the mail server, the mail server comprising:

a processor, and

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a memory including software instructions adapted to enable the proxy server to perform the steps of:

selecting a time when network bandwidth load is low; and  
pushing unretrieved mail messages to a proxy server at  
the selected time, wherein the pushed mail messages  
are cached at the proxy server.

21. *(Withdrawn)* The mail server of claim 20, wherein selecting a time is based on when bandwidth load at a predetermined point in the network falls below a predetermined threshold.

22. *(Withdrawn)* The mail server of claim 20, wherein selecting a time is based on at a predetermined time of day.

23. *(Withdrawn)* A network comprising:  
at least one mail server where electronic mail is retained for retrieval by mail clients;  
a plurality of proxy servers distributed about the network;  
wherein the mail server caches unretrieved mail messages at the proxy servers.

24. *(Withdrawn)* The network of claim 23, wherein unretrieved mail messages are cached at a selected time.

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25. *(Withdrawn)* The network of claim 24, wherein the selected time is determined to be when bandwidth load at a predetermined point in the network falls below a predetermined threshold.

26. *(Withdrawn)* The network of claim 24, wherein the selected time is a predetermined time of day.

27. *(Withdrawn)* The network of claim 23, wherein the mail server synchronizes with the plurality of proxy servers periodically to ensure that when changes are made to a message on the mail server or on the proxy server that the changes are reconciled.

28. *(Original)* A network comprising:  
at least one mail server where electronic mail is retained for retrieval by mail clients;  
a plurality of proxy servers distributed about the network;  
wherein each of the proxy servers comprises:  
a processor, and  
a memory including software instructions adapted to enable the proxy server to perform the steps of:  
permitting a mail request for a mail client to pass through the proxy server to the mail server; and

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attenuating subsequent mail requests for the mail client at the proxy server until a predetermined condition has been satisfied.

29. *(Withdrawn)* A network comprising:  
a mail server where electronic mail is retained for retrieval by mail clients;  
a plurality of proxy servers distributed about the network;  
wherein the mail server comprises:  
a processor, and  
a memory including software instructions adapted to enable the mail server to perform the steps of:  
selecting a time when network bandwidth load is low;  
and  
pushing unretrieved mail messages to a proxy server at the selected time, wherein the pushed mail messages are cached at the proxy server.

30. *(Withdrawn)* The network of claim 29, wherein selecting a time is based on when bandwidth load at a predetermined point in the network falls below a predetermined threshold.

31. *(Withdrawn)* The network of claim 29, wherein selecting a time is based on at a predetermined time of day.